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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/559,198	04/27/2000	Robert P. Loce	XER20341	2240

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EXAMINER

AZARIAN, SEYED H

ART UNIT	PAPER NUMBER
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2625

DATE MAILED: 11/12/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/559,198

Applicant(s)

LOCE ET AL.

Examiner

Seyed Azarian

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 9/4/2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7 is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 April 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's amendment filed, 9/4/2003, has been entered and made of record.
2. Applicants' arguments with regards to Claims 1-18 have been fully considered but they are moot in view of the new ground of rejection.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-6 and 8-18, are rejected under 35 U.S.C. 103(a) as being unpatentable over Chase et al (U.S. patent 6,456,397) in view of Yoshida et al (U.S. patent 5,719,680).

Regarding claim 1, Chase et al discloses a method of altering an image representation to adjust for artifacts attributable to an array lens, the method comprising (column 9, lines 29-39, it corrects imaging artifacts that arise from lateral inconsistencies among lasers. It desirably utilized in conjunction with timing-based corrections for longitudinal inconsistencies).

Obtaining a characterization at selected locations across the array lens (FIG.3, column 6, line 57 through column 7, line 9, laser sources L1, L2, L3, L4, driven by suitable laser drivers

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collectively designated by reference numeral, and lines 54-63, recognizes the different relative positions of the lens assemblies with respect to substrate 55).

From the characterization determining plurality of locations across the array lens (column 5, lines 5-20, digital imaging system including an image to a recording medium (storing) and appropriate dot locations as determining by the digital image data).

However Chase et al fails to disclose "compensation parameter". On the other hand Yoshida in the same field of enhancing images teaches according to the setting of the deskewing unit, thereby compensation for head skew and supplies the select data to the printing head (column 2, lines 15-22).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made, to modify Chase et al invention according to the teaching of Yoshida because it provide for the imaging of flexographic plate which improve and minimize the distortion caused by stretching and accounts for localized variations in the depth and density to provide better result and existence of the desired image.

Regarding claim 2, Chase et al discloses the method as set forth in claim 1, wherein the artifacts attributable to the array lens are induced during image scan using the array lens, resulting in an electronic image representation including the artifacts, the method further comprising: applying the compensation parameters to the electronic image representation including the artifacts, resulting in a post-compensated electronic image representation (column 9, lines 30-47, correcting the image artifacts that arise from lateral inconsistencies among lasers and correcting artifacts produced by actuated imaging devices).

Regarding claim 3, Chase et al discloses the method as set forth in claim 1, wherein the artifacts attributable to the array lens are induced during image output using the array lens, the method further comprising: applying the compensation parameters to an electronic image representation without the artifacts, resulting in a pre-compensated electronic image representation (column 5, lines 37-43, troublesome artifacts are eliminated or reduced while preserving full data integrity).

Regarding claim 4, Chase et al discloses the method as set forth in claim 1, wherein the obtaining a characterization step comprises: measuring optical performance of the array lens at a plurality of locations across the array lens (column 8, lines 48-58, a programmable computer capable of generating random and performing the computation necessary to generate the pattern).

Regarding claims 5 and 6, Chase et al discloses the method as set forth in claim 1, wherein the obtaining a characterization step comprises estimating optical performance of the array lens at a plurality of locations across the array lens (Fig. 4, column 8, lines 50-63, refer to computation and performing).

Regarding claim 8, Chase et al discloses an imaging apparatus comprising, at least one light source an array lens which focuses emitted light from the light source onto a desired receptor, the array lens inducing artifacts in an image representation on the receptor; a memory which stores a plurality of parameters to compensate for the array lens induced (column 5, lines 5-20, digital imaging system including an array of such devices which are used to apply an image to a recording medium and appropriate dot locations as determining by the digital image data).

Regarding claim 9, Chase et al discloses the imaging apparatus as set forth in claim 8, wherein: the imaging apparatus employs the array lens to acquire an image representation from a physical image, thereby inducing artifacts in the image representation, and the processor applies the compensation parameters to the image representation including the artifacts, resulting in a post-compensated image representation (column 9, lines 21-27, the gradient begins at the location where the corrected artifacts would otherwise originate).

Regarding claim 11, Chase et al discloses the imaging apparatus as set forth in claim 8, wherein the array lens comprises a plurality of adjacent rods arranged in a one-dimensional array (Fig. 4, column 8, lines 6-17, refer to adjacent zone).

Regarding claim 12, Chase et al discloses the imaging apparatus as set forth in claim 8, wherein the array lens comprises a plurality of adjacent rods arranged in a two-dimensional array (column 7, lines 19-28, the controller increments with each image pass to provide an axial dimension).

Regarding claim 13, Chase et al discloses the a digital imaging method comprising: determining an error attributable to at least one selected coordinate on an array lens scanning a physical image using the array lens with the determined error resulting in an image representation including artifacts; and compensating for the determined error in the scanned physical image, resulting in a post-compensated image representation (column 9, lines 30-49, correcting the image artifacts that arise from lateral inconsistencies among lasers and correcting artifacts produced by actuated imaging devices).

Regarding claim 17, Chase et al discloses the digital imaging method as set forth in claim 13, wherein the determining an error step comprises, measuring errors induced by the array lens at selected locations relative to the array lens (column 9, lines 51-60, refer to method of correcting imaging errors).

Regarding claim 10, recite similar limitation as claim 2 and are similarly analyzed.

Regarding claims 14 and 15 recites similar limitation as claim 13 and are similarly analyzed.

Regarding claims 16 and 18, recite similar limitation as claim 10 and are similarly analyzed.

Allowable claims

3. The following is an examiner's statement of reasons for allowance.

The claim 7, is allowable due to altering an image representation to adjust for artifacts attributable to an array lens, the method obtaining a characterization at selected locations across the array lens from the characterization determining plurality of locations across the array lens, determining compensation parameter for a plurality of location across the array lens with an iterative restoration method selected from set of ML-EM method sharpening filters, windowed-wiener spectrum and spatial convolution.

These key features in combination with the other features of the claimed invention are neither taught nor suggested by the art of record.

Other prior art cited

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. patent (5,719,680) to Yoshida et al is cited for color printer and printing method with improved color registration through skew-correction of misaligned printing heads.

U.S. patent (5,942,745) to Kline et al is cited for apparatus and methods for digital imaging with reduced periodic artifacts.

U.S. patent (4,741,045) to Denning is cited for optical character isolation system, apparatus and method.

U.S. patent (5,898,790) to Laurence is cited for digital imaging and analysis system.

U.S. patent (6,101,283) to Knox is cited for show-through correction for two-sided, multi-page documents.

U.S. patent (5,832,139) to Batterman et al is cited for method and apparatus for determining degrees of freedom of a camera.

Contact Information

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seyed Azarian whose telephone number is (703) 306-5907. The examiner can normally be reached on Monday through Thursday from 6:00 a.m. to 7:30 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta, can be reached at (703) 308-5246.

Any response to this action should be mailed to:

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Assistant Commissioner for Patents
Washington, D.C. 20231

Or faxed to:

(703) 872-9306, ("draft" or "informal" communications should be clearly labeled to expedite delivery to examiner).

Hand delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application should be directed to T.C. customer service office whose telephone number is (703) 306-0377.

Seyed Azarian
Patent Examiner
Group Art Unit 2625
November 2, 2003


TIMOTHY M. JOHNSON
PRIMARY EXAMINER